

REMARKS/ARGUMENTS

The applicant's attorneys appreciate the Examiner's thorough search and remarks.

Responsive to the objection against Fig. 1, Fig. 1 has been corrected as suggested.

Withdrawal of the objection is requested.

Claim 1 and claims depending from claim 1 have been rejected under 35 U.S.C. §103(a) as obvious over Fujishima in view of Rumennik, Van Zant, Ghandhi, Noda and Ranjan. Reconsideration is requested.

Claim 1 calls for

“a resurf region of said first conductivity formed in said epitaxially formed semiconductor layer, said resurf region being formed over at least a portion of said drift region in said epitaxially formed semiconductor layer between said body region and said drain region”.

It has been asserted that Fujishima in Figs. 15 and 19 thereof shows a

“resurf region 20 of the first conductivity formed in the semiconductor layer of the second conductivity type, said resurf region 20 being formed over at least a portion of the drift region 5 between the body region and the drain region”.

Fig. 19 does not show a P-type region formed in an N-type region that could correspond to a resurf region as recited in claim 1.

Fig. 15 discloses a P-type region 20 formed in an N-type region. However, Fujishima does not state that region 20 is a resurf region. Furthermore, the description of region 20 makes it unlikely that region 20 could serve as a resurf region.

It is well known that a resurf region must be “fully depleted” before recording avalanche breakdown. See definition of resurf at Class 257, Subclasses 492, 493. In Fujishima, P-type region 20 has a dopant concentration of $5 \times 10^{16}/\text{cm}^3$ while the N-type drain drift region 5 in which it is formed has a dopant concentration of $3 \times 10^{16}/\text{cm}^3$. Thus, under reverse voltage conditions, it is the drift region 5, which is the higher resistivity (low concentration) region of the PN junction, that will deplete, not the P-type region 20. Therefore, region 20 would not function

as a resurf region. Accordingly, it is submitted that Fujishima does not show or suggest a resurf region. The record, therefore, lacks a *prima facie* case of obviousness against claim 1. Reconsideration is requested.

Each remaining claim depends from claim 1, and thus includes the limitations thereof as well as other limitations which in combination with those of claim 1 are not shown or suggested by the art of record. Reconsideration is requested.

It is respectfully submitted that the application is believed to be in condition for allowance over the art of record. Such action is earnestly solicited.

THIS CORRESPONDENCE IS BEING
SUBMITTED ELECTRONICALLY
THROUGH THE PATENT AND
TRADEMARK OFFICE EFS FILING
SYSTEM ON September 17, 2007.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'K Salchi', is written over a horizontal line.

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